$$h(s_x, s_y)\theta = 0 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0.5} \cdot h(s_y)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = \pi/2 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0} \cdot h(s_y)_{c=0.5}\right\}$$

$$h(s_x, s_y)\theta = \pi/4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{2}\right)_{c=0.5} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = 3\pi/4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{\sqrt{2}}\right)_{c=0} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0.5}\right\},$$

and wherein $s_x = x/\Delta x$ and $s_y = y/\Delta y$ are re-sampling distances in the horizontal and vertical directions, respectively, and . indicates matrix multiplication.

REMARKS

This application has been reviewed in light of the Office Action dated November 27, 2002, which requires the claims to be restricted to one of the following inventions:

Group I: Claims 1-24 -- drawn to a method of interpolating discrete sample points, classified in class 383, subclass 300; and

Group II: Claims 25-104 -- drawn to mapping discrete sample values, classified in class 382, subclass 278.

By the present Amendment, Applicants elect to prosecute Claims 1-24 of Group I in the present application.

Claims 1-24 are pending for examination, with non-elected Claims 25-104 having been canceled, without prejudice or disclaimer of the subject matter presented

therein. Claims 6, 13, and 23 have been amended to define more clearly what Applicants regard as their invention. Claims 1, 6, 10, 15, and 20 are in independent form.

An early and favorable examination on the merits is respectfully requested.

No petition to extend the time for response to the Office Action is deemed necessary for the present Amendment. If, however, such a petition is required to make this Amendment timely filed, then this paper should be considered such a petition and the Commissioner is authorized to charge the requisite petition fee to Deposit Account 06-1205.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

6. (Amended) A method of interpolating a first set of discrete sample values to generate a second set of discrete sample values using an interpolation kernel, wherein said interpolation kernel [are] is selected depending on an edge strength indicator, an edge direction indicator and an edge context indicator for each discrete sample value of said first set.

13. (Amended) The method according to claim [11] 10, wherein said plurality of kernels are given by:

$$h(s_x, s_y)\theta = 0 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0.5} \cdot h(s_y)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = \pi/2 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0} \cdot h(s_y)_{c=0.5}\right.$$

$$h(s_x, s_y)\theta = \pi/4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{2}\right)_{c=0.5} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = 3\pi/4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{\sqrt{2}}\right)_{c=0} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0.5}\right\},$$

and wherein $s_x = x / \Delta x$ and $s_y = y / \Delta y$ are re-sampling distances in the horizontal and vertical directions, respectively, and . indicates matrix multiplication.

23. (Amended) The computer readable medium according to claim [21] 20, wherein said plurality of kernels are given by:

$$h(s_x, s_y)\theta = 0 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0.5} \cdot h(s_y)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = \pi / 2 = \frac{1}{\sqrt{2}}\left\{h(s_x)_{c=0} \cdot h(s_y)_{c=0.5}\right.$$

$$h(s_x, s_y)\theta = \pi / 4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{2}\right)_{c=0.5} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0}\right\}$$

$$h(s_x, s_y)\theta = 3\pi / 4 = \frac{1}{\sqrt{2}}\left\{h\left(\frac{s_x + s_y}{\sqrt{2}}\right)_{c=0} \cdot h\left(\frac{s_x - s_y}{2}\right)_{c=0.5}\right\},$$

and wherein $s_x = x / \Delta x$ and $s_y = y / \Delta y$ are re-sampling distances in the horizontal and vertical directions, respectively, and . indicates matrix multiplication.

Claims 25-104 have been canceled.